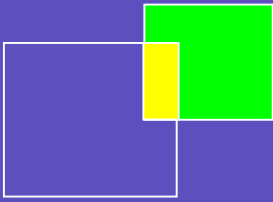


March 19, 2002



Colorado Office

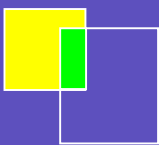
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Category Making in a Down Market



Introduction

Marketing 101 dictates that you craft a unique and compelling message to get noticed and sell your products. In the telecommunications industry, this has been a core task for many a CEO, VP of Marketing, VP of Marketing Communications, and others—determining how to stand out in a crowd.

For many, standing out in a crowd is as easy as selecting a different shirt color. Day-Glow Orange or Neon Green do nicely, for those really wanting to draw attention to themselves. In telecom, these colors are more often articulated into the form of unique and leading-edge categories—BSPs, DLECs, Edge Routers, etc. Standing out means creating a new term that will catch Wall Street's eye and, therefore, accelerate the path to riches.

As a result, the telecom space began to look like the Crayola Colors of the Universe. What was meant to bring distinction actually had the reverse effect, causing confusion and ultimately delaying many technologies' chance at the marketplace.

The down turn in the industry has brought with it a new view of the tenets of Telecom Marketing 101 and requires a re-examination of the strategies for standing out in a crowd—the good and the bad. This white paper from TeleChoice examines our work with more than 100 different startups in recent years and our ongoing thoughts about what it takes to succeed in core marketing principles in the challenged industry before us today.

This white paper is meant to be a starting point for thought. Feel free to contact any of our strategic catalysts at TeleChoice on how this might impact your firm and its marketing strategies.

Are You a Category-Maker or a Better Mouse Trap?

It is rare when you find members of senior management saying their product is not the best thing since sliced bread. Indeed, products are often hyped beyond reasonable bounds and placed on pedestals where they simply should not be.

Taking a step back and casting a discerning, independent eye on your own company, its products, and its respective position in the industry is simply difficult—but necessary. You need to determine how much of an impact you can have in the marketplace and where.

We have heard much about so-called “disruptive technologies” in recent years, driven in part by the book [The Innovator's Dilemma](#) by Clayton Christensen. Not all technologies are so disruptive; many products are mere logical extensions of today's technologies. To keep things simple, we think of new products as fitting into one of three categories:

1. Incremental Performance Improvements (IPI)

These products provide an improvement over existing products by extending advances that others have made in existing technologies. The improvements can usually be measured in terms of performance relative to cost, and cost improvements can come in many forms (space, power, provisioning speed, equipment cost, etc.). However important the area of improvement, an IPI product will deliver an improvement that can be measured as a percentage (10%, 20%, 50%, even 100%).

2. Order-of-Magnitude Improvements (OMI)

These products similarly provide an improvement over existing products; however, the level of improvement is an order-of-magnitude impact—technically at least 10x improvement. It is probably impossible to achieve this level of improvement by merely extending existing technologies, so OMIs almost always involve high levels of innovation—either applying existing technologies in whole new ways and in whole new places or introducing brand new technologies.

3. Disruptive Improvements (DI)

Disruptive innovation isn't about improving the existing ways of measuring performance; it's about completely disrupting the current innovation path for a technology sector. In most cases, disruptive innovation actually involves a performance *decrease* compared to existing products and technologies. However, by introducing a brand new path for innovation, disruptive innovations actually redefine the entire way that performance is measured. Of course, this is only meaningful if the performance can eventually be valued by a large segment of the market, which often takes years, so most disruptive innovations die before they ever achieve that level of success and sustainability.

Disruptive Technologies: Are You Disruptive?

Most startups we talk to really believe they are disruptive. Christensen's book must be the best read title in technology startup circles, and it is a really informative and helpful volume, but there really aren't that many disruptive technologies out there. Considering the mortality rate of companies that introduce truly disruptive technologies, we certainly wouldn't be in a rush to claim that distinction!

We challenge you to name a single company that has introduced a disruptive technology to the telecom industry where the disruptive innovator has actually survived and become the leader in that space.

Did we hear you say Cisco in IP routing? Sorry, we think BBN probably deserves that honor. Cisco, at best, extended technologies that BBN and others had already pioneered. What about Ciena in DWDM? Well first, we aren't convinced that DWDM is truly disruptive (we all just *thought* the number of waves on a fiber was a constant...), but even so, Ciena extended prior work in the space by Bell Labs and others.

In fact, any new innovation, whether disruptive or not, goes through what we call the Hype Curve (see Figure 1). Initially, there can be tremendous excitement about the technology and the promise it holds to transform the industry. However, there is almost always a backlash against the hype, dashing the "market capital" that has been created around the innovation. Not until the technology is well along the path of market adoption is this market capital regained. Specifically, for disruptive technologies, all phases of the Hype Curve last much longer than for innovations that sustain existing technology paths.

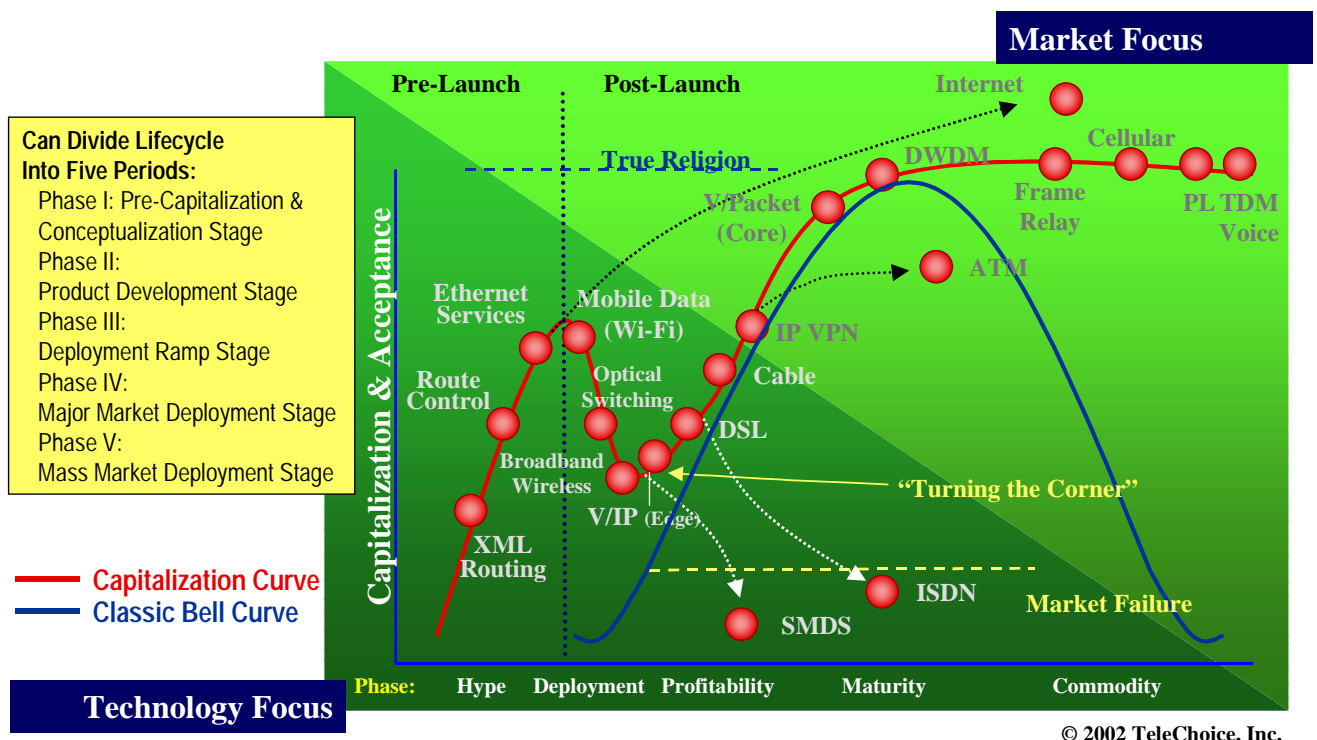


Figure 1. Hype Curve

So for any startup claiming to be a disruptive innovator, there are two fundamental questions: Are you really introducing disruptive technologies and, if so, is that a good thing?

To answer the first question, one must think hard about what's true about the technology. Does your innovation redefine the current pace of performance improvement, or does it sustain it? Will improvements come from new sources? Is a fundamental constraint removed? (You can't repeal the laws of physics, but you may be able to avoid them.) Does the "equation" change? We hear often of classical accepted theorems that drive the industry—Moore's Law (integrated circuits), Gilder's Law (fiber networks), Metcalfe's Law (packet networks). Do you change the equation?

These are all key questions in the quest for differentiation. If you redefine the pace of improvement, you may be disruptive; if you merely sustain the pace, you are not, but that's not necessarily a bad thing.

If you truly are introducing a disruptive technology, we wish you well. The challenges you face will be tremendous and the path will be long. A disruptive innovator should consider many tactics and strategies to increase the likelihood of survival and success, but this paper is not intended to address these issues. We will focus on the more incremental improvements, since this represents most of the industry players, and what this implies for your company's differentiation in the marketplace. In that discussion, we will focus on the issue of category making.

Category Making: Defensibility Is Critical

Not everyone can make a new category, and not everyone that *can* make a new category should choose to. The implications of these two statements are profound and need to be carefully considered by anyone tempted to be a category maker.

First, what does it mean to make a new category? Companies will attempt to create a new category when they believe their product is so unique that it is inappropriate to compare it to existing products in existing categories and that trying to do so does not serve either the potential customers or the company well.

This is a big statement and a big risk. Tremendous benefit can actually be gained by comparing your products to existing, well-understood products (assuming you have a good product that compares favorably with others). Other companies have already invested significant time and marketing dollars to educate buyers on the value and benefits of buying and using a certain type of product. If you can leverage another company's investment to your benefit, you can focus your time, attention, and budget on educating the market on how your product stands out from others in the category.

However, if you attempt to create a new category, your situation is tremendously different. At the simplest level, your company becomes the one bearing the burden of educating the market on the benefits and value of the new category. This takes tremendous time and can easily slow the development of the market for your product by months, maybe even years.

More significantly, the nature of competition fundamentally changes for category makers. Companies attempting to create a new category are no longer competing against discrete existing companies but instead are competing against entire established and accepted categories—even against well-established and accepted ways of building and operating networks. Your challenge becomes the monumental task of convincing buyers to fundamentally change the way they operate. This represents tremendous risk for buyers.

In basic terms, if your product fails to deliver enough “reward” to buyers, there’s no way they will accept the risk of completely changing the way they think and act—they will not bet on a whole new category of product. The easiest way to think of this is in terms of the levels of innovation that we described earlier. If your product does not offer an order-of-magnitude improvement (OMI), you do not stand a chance as a category maker—the risk/reward equation will not work for your target market.

There’s a second critical criterion for determining whether a company has the chance to be a category maker and that depends on the defensibility of its innovation. If existing players in an existing category can easily duplicate nearly all the benefits of the innovation, the new category fails. In this scenario, the risk/reward equation fails the category maker—the customer can achieve the rewards without taking on the risk.

As we work with innovative companies, we encounter two levels of defensibility. The most common form of innovation is around a unique feature no one else has yet implemented. However, there are no insurmountable barriers to keep existing players from adding that new feature to their existing products. No matter how cool or unique the feature, it is just a matter of time before it becomes incorporated into the existing category. The second level of defensibility is much more rare and centers on a unique architecture (business, service, or product architecture). Existing companies cannot achieve the performance improvement without completely rearchitecting their product or business. If they choose to rearchitect, in effect they choose to participate in the new category.

The different scenarios around the two dimensions of level of innovation and level of defensibility are represented in Figure 2.

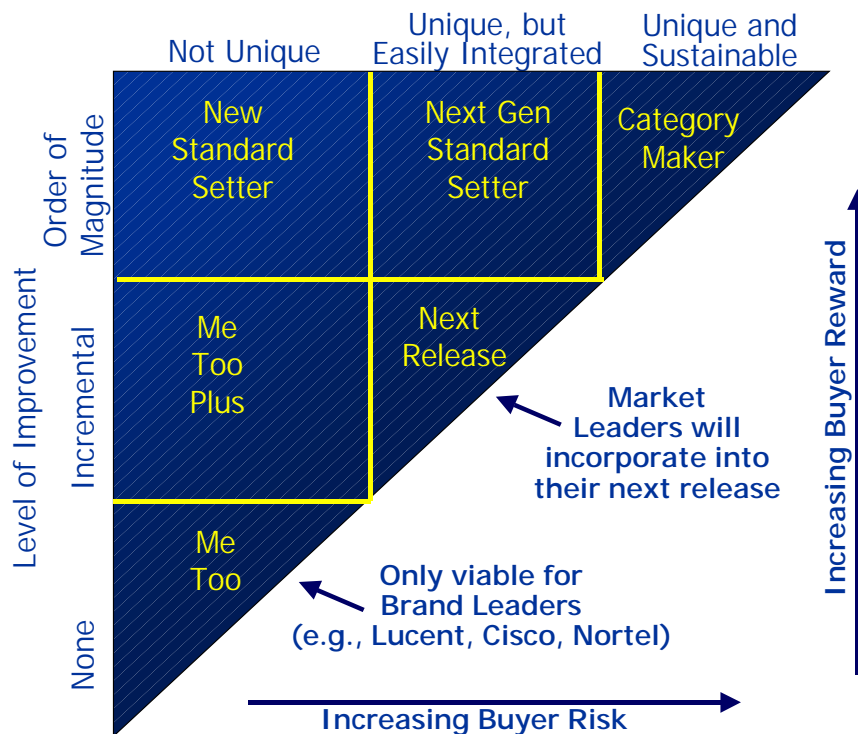


Figure 2. The Major Technology Innovation Groups

Figure 2 characterizes companies based on where they fall on these two dimensions. The most interesting of these for our discussion are the companies that offer an OMI, the top row of companies.

Standard Setters are the first ones to achieve a level of performance that everyone else has already been striving for, using well-understood approaches. These companies are out in front of the others, but the manner in which they are is not considered all that unique.

Next Generation Standard Setters are a little more advanced—they achieve the OMI performance by taking a whole new approach, but that new approach is fairly easy to incorporate in any next version of a product line.

Although these Standard Setters and Next Generation Standard Setters achieve industry breakthroughs, since there's nothing inherently defensible in their approach, there's no compelling reason to believe they will be long-term industry players. In fact, these types of companies are excellent candidates for takeover by market leaders who can easily integrate their capabilities into existing products to stay on the industry's leading edge of performance.

An excellent example of the Next Generation Standard Setter is Ipsilon. Ipsilon introduced the concept of IP switching as an order-of-magnitude improvement for IP networks over IP routing. Unfortunately, there was nothing inherently defensible about Ipsilon's concept, and it could easily be integrated into existing IP products. Within a month of Ipsilon's announcement, market leader Cisco announced that IP switching would be included as a feature in a near-term future software release for its existing products. There was no reason for existing Cisco customers to switch vendors to achieve the benefits, and Ipsilon, for all intents and purposes, was dead. (Nokia eventually acquired Ipsilon for a relatively small purchase price.)

Of course, *Category Makers* are the players that combine an OMI with an architectural level of defensibility.

Why Category Make?

Just because you have the characteristics of a category maker (architecturally defensible OMI), does not mean you need to make a new category. You can instead choose to position your product within an existing category. So given all the challenges and risks associated with category making, why would anyone bother trying to be a category maker? Let's consider the benefits of category making and when it is appropriate.

Category Making: The Good Times

During the boom years of telecom, especially 1999 to 2000, a tremendous amount of category making activity existed—although not all of it successful. This level of category making activity was directly tied to the amount of money flowing into the telecom industry.

On one side, investors were pouring money into new telecom service providers, and these providers were spending that money to buy equipment to build their new networks. On the other side, investors were pouring money into new startups building equipment for these service providers. New companies were emerging every week and every category of equipment was getting very crowded with “Me Too” and “Me Too Plus” players. It was virtually impossible for a startup to stand out in these crowded fields. Clear differentiation was difficult and it was impossible for buyers and influencers to keep track of all the different players and the correct positioning of each.

Category making became the practice of choice for standing out from the crowd. It was more than the DayGlo shirt—it was also the rainbow wig. Of course, category making is hard and expensive, but trying to stand out in a crowded category is hard and expensive too. The money was available from investors to do either; it was just a matter of where one chose to spend it.

Mistakes were made. Some companies tried to make categories when they didn't have the right stuff—they lacked an OMI or enough defensibility. Many of them crashed and crashed hard.

Other companies chose not to category make when they should have. They tried hard to stand out in crowded categories where buyers were so overwhelmed by options that their initial winnowing process became a checklist and a “speeds-and-feeds” beauty pageant. Products that provided order-of-magnitude improvements through unimagined areas of innovation were overlooked because the makers of the categories in which they languished had long ago defined the terms of competition.

Some got it right. They positioned in the right existing category and worked hard to present clear differentiation and a compelling value proposition to stand out in a crowded field. A great example of this is Juniper. It stepped into the core routing category created by Cisco and dominated by Cisco's 12000 product. It incrementally improved on the performance along the competitive dimensions defined for the category by Cisco and introduced some eye-catching enhancements around reliability, a topic of high value to the target market. Obviously, its success is well documented elsewhere.



Others got it right by successfully creating a new category and convincing buyers that they needed to change the way they thought, designed, and bought. A great example of this is Ciena with the creation of the DWDM optical transport category, which introduced an order-of-magnitude (16x) improvement over existing optical transport gear and required an architectural change for competitors to match. Obviously, Ciena's hard work in creating this category has translated into market success and value creation.

Category Making: The Hard Times

So how does a down market affect the decision of whether or not to category make? Things are definitely different in a down market. For better or for worse, fewer surviving companies are in each category, so it's easier to stand out on the basis of one's own merits. There's also less money available to spend on the evangelization required to successfully create a new market. Since cash is tight, the time it takes to change the way that buyers think and act is much more difficult to afford.

So, why would anyone try to category make in a down market?

Startups must consider two fundamental issues. The first is the eternal truth that being in the wrong category is a bad thing. The second is the specific truth that customers are more sensitive than ever to the risk/reward equation during tough times.

Categories are extremely helpful both to vendors and to their customers. Vendors can use category definitions as a short cut: "We're just like Juniper, except that...." The category shortcut creates an immediate connection so that the audience can understand the fundamental value proposition and then spend all its energy understanding the distinctions.

Similarly, customers use categories to understand who their vendor options are and the fundamental criteria for evaluating those options. A given customer may more heavily weight one factor (e.g., scalability) than another (e.g., multiprotocol support), but the set of criteria have already been defined as part of the implicit category definition.

This is a wonderful situation when a product is in the right category. It's a disaster when a product is in the wrong category. The shortcuts fail and the decision criteria are all wrong. Some customers that should buy the vendor's product don't because they do not understand the true value of the innovation. That's bad. Other customers do buy the product, but for all the wrong reasons and wrong applications. That's even worse.

However, a greater challenge for startups in a down economy is the dominance of the status quo. Fear, uncertainty, and doubt are magnified when every dollar is precious and every purchase decision is under the microscope. Change becomes a dirty word, and risk is managed into oblivion.

In this environment, every startup is suspect. Customers cannot afford to bet their budgets (or more realistically, their jobs) on an unproven company with an unclear future. Throw in significant innovation, especially around a new architecture, and the market gets really bleak.

Thankfully, customers still have problems that need to be solved. They have pains that will not go away just because their budget has. If the only way to effectively address that pain is by implementing a new product using a new and unproven architecture, delivering an order-of-magnitude improvement, then so be it.

In fact, in this environment, category makers have a distinct advantage over non-category makers. Customers that need the OMI are going to buy it. If they believe that the first startup to offer it doesn't have a defensible position (i.e., they are a standard setter or a next generation standard setter), they will wait for the incumbents to match the offer with their next release. But if the startup offering the OMI is truly in the category maker space, with architectural defensibility, customers won't be able to wait for the rest of the market to catch up.

Category making in a down market is also easier and less expensive. There's certainly less competition for attention, and the industry as a whole is more focused on meaningful substance, not fluff and (expensive) hype.

How to Category Make

The science of category making has been well defined over the years. The steps are well known, the path well marked. Each category maker will make decisions about which steps to emphasize, and the costs and duration of each step will vary over time. We have summarized the process in Figure 3 below.

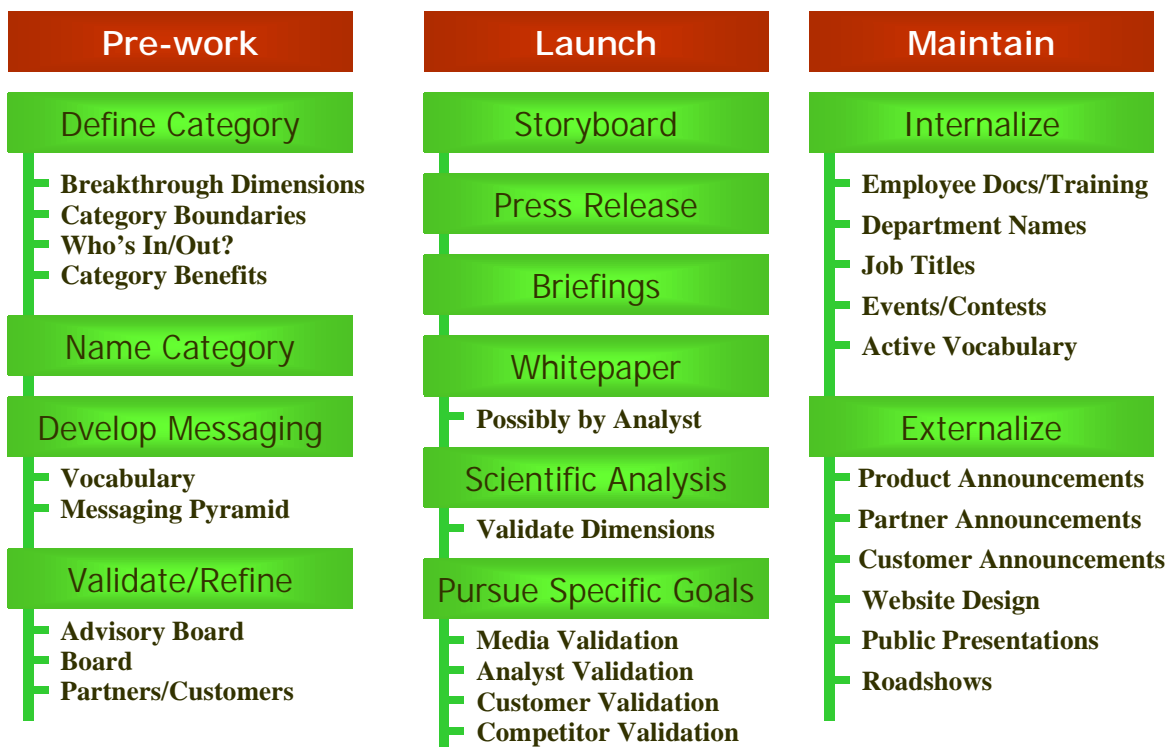


Figure 3. Category Making Process

If you have not been down the category making path before, it is helpful to have a guide along the way. Feel free to call us or contact us via email at anytime to discuss the challenges.

Where Do You Stand?

So if you put all this together and apply it to your present situation, here are some guidelines:

If you're a new startup trying to get funding and to get service providers or someone else to buy your equipment today, good luck. If you don't represent a tremendous "reward" for the risk involved, we doubt any established service providers will take the bet. We tend to use OMI as the yardstick for "tremendous," which by definition means 10x, but you may be able to get by with 5x. You definitely can't get by with just a 10% improvement. If you do have a defensible OMI, it still won't be easy, but you should be able to attract both funding and customers.

If you're a mature "startup" with existing products and existing customers successfully using those products, congratulations! Sources of capital are scarce and it's a real luxury to have your own product's revenue streams as one of those sources. Your chances of survival are greatly improved by having existing successes. OMI or not is not as critical to you although there's still the issue of defensibility against well established players who can survive predatory behavior (e.g., pricing well below cost) while you cannot. This clearly becomes a survival game in the near term and drives some tough decisions, like whether to shut down some products or strategic initiatives that don't fit either tactically or strategically. It's very important in doing this to understand the difference between "cancelled" and "delayed." From an inside-out strategy perspective, something we advocate immensely here at TeleChoice, there may be products/markets that are "right" for the company, just not "right now." Others probably should never be pursued. Understanding the difference and making the appropriate choices (layoffs, intellectual property, asset sales, etc.) is critical for long-term success and well worth making the right small investments now to be sure.

If you're a mature "startup" with existing products but without existing customers or with existing customers who aren't likely to survive, ouch! If you have a defensible OMI, you'd better get really good, really fast, at clearly communicating it and the benefits your innovation represents. It won't be easy, but hopefully you can leverage your existing relationships (investor and customer) to survive and thrive. If you don't have a defensible OMI and your funds are shaky, then have you considered your exit strategy?

If you're a company like Juniper or Ciena who has established leadership in a category, you're probably in another boat. You successfully created the new category and have taken plenty of share. What comes next? The battle for survival isn't over nor is the battle for market leadership. What are the right next steps—next products, next markets? What available assets are right for you to pick up at bargain basement prices? (See "exit strategy" in previous paragraph.) Is it the right step for you to consider consolidation through merging with another successful startup so that you have a more complete value proposition to your customers (economies of scope vs. economies of scale)? These are the predominant considerations.

Final Thoughts

Category making is a critical consideration for any marketing department today. The real issue though, whether in rich economic times or poor, is often not the considerations of being in the right category but the challenges of being successful when you're positioned in the *wrong* category—these are almost impossible to overcome. Your customers will compare you to the wrong competitors, evaluate you using the wrong criteria, and consider you for the wrong opportunities. This could be deadly in today's environment.

So if you don't fit into an existing category, it's probably critical for you to be a new category maker.

The important goals are still the same:

- Educate the industry on the need for change
- Educate the industry on the value of the OMI
- Clearly communicate the compelling vision AND the near-term pain relief

The reality is:

- Having to do all this with a smaller budget
- But facing less competition for attention
 - That's why marketers get paid the big bucks, right?

ABOUT TELECHOICE, INC.

TeleChoice, Inc., the leading strategic catalyst for the telecom industry, is recognized worldwide as the expert in launching telecom innovations. TeleChoice focuses on the intersection of strategy development and technology for telecom service providers and the vendors who serve them. TeleChoice helps companies crystallize business and market strategy, ignite new market categories, distill the value of innovation, and accelerate adoption of new technologies. Strategic Catalysts like TeleChoice use rapid development methodologies to accelerate project completion. TeleChoice clients can achieve in days or weeks the strategic milestones that usually take months or years. For more information on TeleChoice, visit <http://www.telechoice.com>.